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ABSTRACT

Multiple-choice items were used to measure knowledge of drug abuse among four distinct groups of college students in the Los Angeles area. No difference in knowledge was found about five aspects of drug abuse measured by subscales of the instrument. These findings suggest that knowledge about drugs is remarkably uniform, although the students tested came from areas that, according to most authorities, could have been expected to have highly discrepant amounts and types of drug use. Forty Likert-scale items were used to measure attitudes toward certain aspects of drug abuse among the same four groups of college students. The data suggest that students tend toward the conservative side in their attitudes toward a drug addict and the way the addict should be handled by society; the students are however, not willing completely to deprive an addict of his personal rights and not have a voice in the way he should be treated. The Drug-Abuse Scales are appended. (Author/BJG)

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VALIDATION OF A DRUG-ABUSE SCALE AND COMPARISONS OF KNOWLEDGE AND ATTITUDES ABOUT DRUG ABUSE AMONG COLLEGE STUDENTS

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This paper reports results from the administration of an instrument measuring both knowledge and attitudes about drug abuse among college students in the Los Angeles area. The items measuring knowledge were selected from those on a test used to pre- and posttest professional and paraprofessional workers in the field of drug abuse as part of training given at the UCLA Drug Abuse Training Center in 1972. The items measuring attitude had not been used previously. The first part of the paper will report on the validation of a drug-abuse scale for use with a college population; the second part will compare results among four distinct groups of college students in the Los Angeles area.

VALIDATION OF A DRUG-ABUSE SCALE: THE INSTRUMENT

Multiple-choice items

The complete instrument consists of 79 items. Thirty-nine of these are multiple-choice items designed to measure knowledge of drug abuse. These sections of the instrument are composed of five subscales, dealing with medical and street terminology, legitimate medical uses of drugs, the drug "world," the effects of drugs, and with treatment modalities. In this paper, items have been renumbered and rearranged by subscales for ease of discussion. The instrument itself is presented in the Appendix in this revised format.

The 39 items were selected from among approximately 80 written by members of the evaluation team of UCLA's Drug Abuse Training Center.[1] The original 80 items were written to strict criteria governing the form of an acceptable multiple-choice item, reviewed by a panel of experts, then subjected to two years of actual use in the training of drug-abuse professionals.

The criteria governing the form of each item were (1) an appropriate grammatical and syntactical link between the stem and each of the four alternatives, (2) approximately equal length and complexity of each alternative, (3) alphabetization of alternatives to eliminate clues due to order, and (4) rewriting of any items that misled respondents into wrong answers through ambiguous wording or similar difficulties.

Each item was reviewed by a panel of doctors,[2] and judged for accuracy by these experts. All items that required answers subject to rapid change or were impossible to verify were eliminated. Items pertaining to the number of drug addicts or the street price of a particular drug for example were typical of this group.

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[1] Churchman, D., Katz, S., & Long, J. UCLA Drug-Abuse Questionnaire (Forms A & B). Los Angeles: University of California, 1972.

[2] The panel consisted of Dr. Thomas Ungerleider, Director, UCLA Drug Abuse Training Center; Associate Professor of Medicine, UCLA; Member, President's Commission on marijuana; Dr. Sydney Cohen, Coordinator of research on drugs, UCLA, Professor of Psychiatry, UCLA; and Dr. David Smith, Director, Haight-Ashbury Free Clinic.

The 80 items were used in pre- and posttesting the instruction given to drug-abuse professionals and paraprofessionals at the NIMH-funded UCLA Drug-Abuse Training Center. This testing process took place over a period of two years; during that time, approximately 600 doctors lawyers, parole officers, military personnel, teachers, counselors, and ex-addict paraprofessionals attended one- and two-week training sessions where they heard presentations by experts in all aspects of drug abuse.

After the two-year testing period, 39 items were selected from the original 80 for a new instrument with which to investigate accepted knowledge of drug abuse among college students. Elimination of some of the original items for use with a different population does raise the question of the appropriateness of the new scale. To determine its appropriateness, an item analysis was conducted based on responses by a sample from the population of interest. Table 1 shows the number of items, mean percent correct, standard deviation, and KR-20 reliability coefficient for each subscale and for the total instrument. KR-20 coefficients are reasonable considering the length of the subscales. The scores suggest that students are most knowledgeable about the source of drugs and least knowledgeable about treatment modalities and the legitimate medical uses of drugs.

Table 1

Scales of the Drug-Abuse Test

Scale	Items	Mean Percent Correct	Standard Deviation	KR-20
Drug World	1- 4	56.25	1.17	.47
Terminology	5-14	46.66	2.02	.49
Legitimate Medical Use	15-20	52.20	1.29	.47
Effects	21-32	48.50	2.23	.57
Treatment	33-39	49.00	1.21	.38
Total	39	46.87	5.34	.76

Table 2 shows the intercorrelations among the scales. Generally, these are low among subscales, suggesting that each is measuring a different area of knowledge, and high with the total scale, suggesting the validity of the scale itself.

Table 2

Intercorrelations of Scales of the Drug-Abuse Scale*

	Drug World	Terminology	Legitimate Medical Use	Effects	Treatment
Drug World	-				
Terminology	39	-			
Legitimate Medical Use	37	29	-		
Effects	28	29	13	-	
Treatment	23	50	19	38	-
Total	62	77	53	70	67

*Decimals omitted

Table 3 presents some of the data with respect to each item. A discrimination ratio was arrived at by identifying the top and bottom 27 percent of respondents on the basis of total score, determining the percent of each group having the item correct, and dividing one by the other. For example, 3.09 high-scoring individuals are correct on item 1 for each low-scoring individual who is correct. Twenty-one of the thirty nine items discriminate among the two groups by a ratio of better than 2:1; of these, nine have a discrimination ratio greater than three; and of these, four have a discrimination ratio above five. Two items (19 and 38) have discrimination ratios of less than one, indicating that they discriminate inversely among high- and low-scoring individuals. Table 3 can be found on page 6.

The point-biserial correlations presented in Table 3 show that correlations between items and total score are always smaller than correlations between items and subscales. The relatively small point-biserial correlations between each item and total score suggest, as do the interscale correlations of Table 2, that the scales are measuring different rather than overlapping areas of knowledge. The item-subscale point-biserial correlations suggest reasonable intra-scale coherence, with the exceptions of items 19, 26, 31, and 38. Items 26 and 31 deal with aspects of drug effects and treatment requiring more advanced knowledge than that normally possessed by the general public and are among the items that discriminate between the general public and drug-abuse professionals.

Table 3

Item Analysis:
Multiple-Choice Items

Scale	Item	Discrimination	Point-Biserial Correlation: Item-Subtest.	Point Biserial: Item-Total	Correct Percent
Drug World	1	3.09	.62	.25	31
	2	2.66	.64	.51	67
	3	1.82	.55	.27	53
	4	2.35	.67	.52	74
Terminology	5	1.39	.30	.24	85
	6	3.83	.57	.49	50
	7	1.67	.40	.25	50
	8	7.22	.34	.28	27
	9	1.89	.24	.14	27
	10	3.26	.45	.35	42
	11	1.88	.41	.33	49
	12	2.06	.42	.35	49
	13	4.12	.59	.44	41
	14	2.06	.46	.37	45
Legitimate Medical Use	15	2.14	.70	.49	72
	16	1.50	.62	.34	76
	17	2.06	.34	.10	18
	18	1.80	.69	.38	72
	19	0.34	.21	-.06	13
	20	7.73	.47	.34	21
Effects	21	1.89	.58	.26	47
	22	1.19	.34	.18	86
	23	1.38	.40	.31	72
	24	2.21	.35	.25	31
	25	2.84	.43	.35	40
	26	1.55	.27	.12	24
	27	1.57	.46	.38	71
	28	1.52	.54	.35	71
	29	5.56	.44	.50	45
	30	1.61	.49	.35	60
	31	3.78	.27	.21	21
	32	2.06	.32	.13	14
Treatment	33	10.31	.41	.35	16
	34	2.06	.34	.08	12
	35	1.52	.52	.38	85
	36	2.06	.61	.41	62
	37	2.06	.51	.26	38
	38	0	-.08	-.10	01
	39	1.78	.58	.52	82

The final column of Table 3 indicates the percent of the 109 students in all four colleges answering each item correctly. On the basis of these figures, ten items (1, 17, 19, 20, 26, 31, 32, 33, 34, and 38) are exceptionally difficult (less than 33% correct responses). According to this analysis, item 19 and 38, which failed to discriminate knowledgeable from non-knowledgeable students, have negative point-biserial correlations, and are answered correctly by 19.1 percent of respondents.

Likert-scaled items

The remaining 40 items in the instrument are Likert-scaled. They are intended to measure attitudes toward certain aspects of drug abuse. Unlike the multiple-choice items, these questions have no long history of use or development. Rather, the data reported here are based on the first administration of these questions and represent the beginning of the development and validation process.

The forty items are distributed among five subscales. The first of these, consisting of thirteen items, deals with methods of treating drug abuse. High scores suggest a preference for a drug-free approach; low scores suggest a preference for methadone or some other form of maintenance approach. Nine items solicit opinions as to the extent to which the addict should be involved in planning and supervising his own cure. High scores indicate that the addict should have a voice in his treatment and low scores suggest that treatment should be imposed regardless of the addict's own feelings or capabilities. The third subscale, consisting of ten questions, deals with the causes of drug abuse. High scores suggest the addict himself is to blame for his drug use; low

scores suggest that the environment is the primary cause. Four items relate to drug laws, with higher scores suggesting more liberal or permissive laws. The remaining four items overlap several subscales and were classified under a subscale named "miscellaneous."

Table 4 presents data on each item. As in the case of the multiple-choice items, the questions have been renumbered and rearranged by subscale for ease of discussion. The items themselves are presented in the Appendix and have been similarly renumbered and rearranged. Mean scores and standard deviations are reported for the subscales and for each item. Four of the five means fall on the "conservative" side of the scale: (1) students lean more toward blaming the addict than the society for addiction, (2) more toward imposing methadone maintenance than toward permitting drug-free programs as a way of dealing with addiction, (3) more toward maintaining rather than liberalizing existing laws (with the exception of those regarding marijuana) and (4) are strongly against the idea of having to try drugs in order to understand their effects. Only on the scale measuring the extent to which the addict should be permitted to help plan his own cure is there a tendency toward the "liberal" side of the scale.

As subscales were formed according to *a priori* judgments, the inter-correlations among items and subscales are of interest as an estimate of internal consistency of each subscale and of the instrument as a whole. As in the case of the multiple-choice items, with the exception of item 16, correlations between the item and the subscale are higher than those between the item and the scale as a whole. In view of the early stage of development of these items and the need to study results in order to improve each, it was decided to retain all of them for the comparison study among the groups of college students.

Table 4

Item Analysis:
Likert-Scale Items

Subscale	Item	Mean	Standard Deviation	Correlations: With Scale	With Subscale
Method	1-13	2.94	.45	.81	1.00
	1	3.38	1.18	.32	.50
	2	3.12	1.27	.26	.53
	3	3.16	1.23	.24	.45
	4	2.26	1.27	.22	.44
	5	3.38	1.13	.43	.51
	6	2.24	1.02	.25	.31
	7	3.06	1.05	.29	.30
	8	2.83	.94	.31	.37
	9	3.71	1.22	.49	.49
	10	2.36	.97	.37	.33
	11	2.39	1.11	.32	.22
	12	3.39	1.05	.40	.43
	13	3.04	1.04	.33	.29
Addict-Lure	14-22	3.32	.61	.85	1.00
	14	3.61	1.26	.44	.57
	15	3.84	1.28	.47	.59
	16	1.56	.87	.14	.08
	17	3.22	1.18	.48	.56
	18	3.04	1.12	.51	.60
	19	4.03	1.15	.53	.63
	20	3.06	1.21	.39	.41
	21	3.30	1.23	.41	.48
	22	4.21	1.20	.54	.63
Addict-Cause	23-32	2.88	.47	.68	1.00
	23	3.20	1.25	.39	.46
	24	2.62	.99	.22	.36
	25	3.12	1.17	.38	.50
	26	2.67	1.11	-.05	.29
	27	2.79	1.29	.31	.47
	28	3.60	1.04	.43	.33
	29	2.37	.88	.41	.51
	30	2.63	.96	.42	.53
	31	3.16	1.15	.30	.48
	32	2.63	1.02	.18	.44
Law	33-36	2.76	.84	.64	1.00
	33	1.67	1.15	.39	.67
	34	2.84	1.24	.50	.68
	35	2.09	1.15	.46	.53
	36	3.43	1.58	.32	.72
Miscellaneous	37-40	2.62	.80	.62	1.00
	37	3.35	1.23	.49	.62
	38	1.95	1.18	.39	.73
	39	3.20	1.09	.37	.51
	40	2.00	1.33	.41	.77

COMPARISONS OF DRUG-ABUSE KNOWLEDGE AND ATTITUDES AMONG LOS ANGELES COLLEGE STUDENTS

Groups participating in the study

In order to investigate the knowledge of and attitudes toward drugs among Los Angeles area college students, groups were selected from four schools in different parts of the region and distinct from one another in the types of students enrolled.

Group one consisted of elementary-school teacher credential candidates at UCLA. Although approximately evenly divided among whites and blacks, they were almost exclusively female, in their fifth year of college, possessing the best academic qualifications of the four populations, but with little or no work experience.

Group two consisted of masters degree candidates in the behavioral sciences at California State College at Dominguez Hills. These students were older and more diverse than those in the other groups. The majority came from Black areas of south central Los Angeles. The remainder were divided among upper-class white females in their forties and fifties and White and Mexican-American males and females in their mid-twenties. Many are working in social service agencies or schools and have frequent contact with drug and alcohol abuse.

Group three consisted of BA candidates at California State University at Northridge. While drawing on students from throughout the city, this school may be thought of primarily as serving upper

middle-class suburban undergraduates at a time when use of hallucinogens and soft drugs was believed to be quite common among the age group and social class represented.

Group four consisted of AA degree candidates at Moorpark Community College. Moorpark is about 60 miles from the center of Los Angeles and is situated among orchards and grazing lands. Students here were assumed to have little direct contact with the urban drug culture, and they were younger and more uniform both socially and ethnically than the other three populations.

Results

Table 5 presents mean scores on each of the subscales of the multiple choice items for each of the four groups and for each sex. In view of the diversity of the groups, the fact that the differences are small is surprising.

Three *a priori* hypotheses were held regarding the four groups. The first of these was that no difference would be found in knowledge between students at Dominguez Hills and those at Northridge. The second was that there would be no difference in knowledge between students at UCLA and those at Moorpark. The third was that students at Dominguez Hills and Northridge would be more knowledgeable than those at UCLA and Moorpark. These hypotheses reflect common opinions that drug use is heaviest in the inner city and the suburbs. F-tests associated with related null hypotheses were insignificant in all cases.[3]

[3]The F-test for differences in knowledge by sex also proved insignificant.

Table 5

Scores by Group and Sex:
Multiple-Choice Items

Items		4	14	5*	12	6*	37*
Group	N	Drug World	Terminology	Legitimate Medical Use	Effects	Treatment	Total
UCLA	29	1.97	4.35	2.52	5.45	3.03	17.31
CSDH	18	2.17	5.28	2.50	6.56	3.33	19.83
Moorpark	43	2.28	4.47	2.67	5.44	2.67	17.53
CSUN	19	2.74	5.00	2.68	6.52	3.05	20.00
Male	48	2.40	4.98	2.67	6.06	2.98	19.02
Female	61	2.15	4.43	2.56	5.55	2.92	17.74
All	109	2.26	4.66	2.61	5.82	2.94	18.28

*Reflects elimination of Items 19 and 38.

That is, the data suggest that knowledge about drugs is remarkably uniform among students throughout the Los Angeles area despite seemingly significant differences in population characteristics of the four groups. Whether this is due to availability of information about drugs through the media and the grapevine, lack of differences in actual drug use among the four groups, other factors, or interaction among factors, is open to speculation.

A similar lack of differences exists among the four groups with respect to attitudes toward drugs (Table 6). As noted above, overall mean scores fall on the "conservative" side on four of the five scales, and on the "liberal" side on the remaining scale. Differences among the group means are small, although UCLA and Moorpark are consistently more conservative than Dominguez Hills and Northridge. The one exception occurs on the Addict-Cure scale on which all schools take the more "liberal" stance, with UCLA taking the most liberal stance of all.

Table 6

Scores by Group:
Likert-Scale Items

Subscale	Number of Items	Group	Mean	Standard Deviation	Standard Error	Reliability*
Method	13	UCLA	2.98	.24	.05	-.09
		CSDH	3.06	.25	.06	-.65
		Moorpark	2.80	.62	.09	.67
		CSUN	3.10	.25	.06	-.07
		Total	2.94	.45	.04	.52
Addict-Cure	9	UCLA	3.53	.39	.07	.42
		CSDH	3.48	.45	.11	.34
		Moorpark	3.05	.78	.12	.64
		CSUN	3.44	.28	.66	-.25
		Total	3.32	.61	.06	.58
Addict-Cause	10	UCLA	2.92	.25	.05	-.43
		CSDH	2.78	.58	.14	.58
		Moorpark	2.90	.58	.09	.60
		CSUN	2.86	.35	.08	.08
		Total	2.88	.47	.04	.47
Law	4	UCLA	2.78	.73	.14	.43
		CSDH	3.08	.88	.21	.41
		Moorpark	2.42	.77	.12	.25
		CSUN	3.17	.85	.19	.48
		Total	2.76	.84	.08	.40
Miscellaneous	4	UCLA	2.57	.45	.08	.14
		CSDH	2.72	1.09	.26	.54
		Moorpark	2.47	.88	.14	.50
		CSUN	2.96	.62	.14	.17
		Total	2.62	.80	.07	.44
Total	40	UCLA	3.03	.17	.03	.28
		CSDH	3.06	.35	.08	.70
		Moorpark	2.81	.57	.09	.87
		CSUN	3.11	.20	.04	.32
		Total	2.96	.42	.04	.81

*Cronbach's alpha coefficient.

SUMMARY

In 1972 thirty-nine multiple-choice items were used to measure knowledge of drug abuse among four distinct groups of college students in the Los Angeles area. No difference in knowledge was found about five aspects of drug abuse measured by subscales of the instrument. These findings suggest that knowledge about drugs is remarkably uniform, although the students tested came from areas that, according to most authorities, could have been expected to have highly discrepant amounts and types of drug use.

Forty Likert-scale items were used to measure attitudes toward certain aspects of drug abuse among the same four groups of college students. Briefly, the data suggest that students tend toward the "conservative" side in their attitudes toward a drug addict and the way the addict should be handled by society; the students are however, not willing completely to deprive an addict of his personal rights and not have a voice in the way he should be treated.

Appendix

Drug-Abuse Scales

A. Multiple-choice Items

Circle the letter indicating the single best response to each of the following statements:

1. The cocaine traffic in the U.S. begins in which of the following parts of the world:

   A. Africa
   B. Australia
   C. Far East
   *D. South America

2. Before raw opium can be processed into heroin it must first be converted to a base of:

   A. Amphetamines
   B. Cannabis
   C. Cocaine
   *D. Morphine

3. Which of the following countries would be least likely to prosecute a first offender for the illegal possession of marijuana:

   A. Germany
   B. Greece
   *C. Netherlands
   D. Turkey

4. Which of the following drugs is obtained from opium?

   A. Bromide
   B. Hashish
   *C. Morphine
   D. Peyote

5. "Tolerance" to drugs means that:

   A. Decreasing amounts of the drug are necessary to obtain the same effect
   *B. Increasing amounts of the drug are necessary to obtain the same effect
   C. The original effect can no longer be obtained no matter how large the dose
   D. None of the above

continued

6. Which of the following refers to amphetamines:

A. Pinks
B. Reds
*C. Whites
D. None of the above

7. Which of the following refers to the place where young addicts meet to take heroin?

A. Junkyard
B. Playground
*C. Shooting gallery
D. Soda fountain

8. The term "chipping" refers to an individual who:

A. Dilutes a drug with milk, sugar, or baking powder
B. Is going through withdrawal
C. Receives a free bag of heroin for selling a specified number of bags
*D. Uses heroin sporadically

9. With respect to drug use, "potentiate" means:

A. Each drug increases the effect of the other
B. One drug enhances the effect of a drug taken later
*C. Either of the above
D. None of the above

10. A combination of Amobarbital sodium and Secobarbital sodium is known by abusers as:

A. Ice cream
B. Joy powder
*C. Rainbows
D. STP

11. Which of the following terms does not apply to an addict's equipment for the injection of an illegal drug?

A. Balloon
B. Spike
C. Spoon
*D. Tack

continued

12. Which term refers to a hallucinogen?

A. Dilaudid
B. Luminal
C. Novocaine
*D. Psilocybin

13. Which group of drugs are <u>all</u> barbituates?

*A. Amytal, Nembutal, and Seconal
B. Benzedrine, Dexedrine, and Methedrine
C. Codeine, Heroin, and Paregoric
D. Stelazine, Thorazine, and Valjum

14. Which one of the following terms refers to subcutaneous injection of a dangerous drug?

A. Hot shot
B. Mainline
*C. Skin-pop
D. Taking a hit

15. Which of the following might be prescribed by a doctor for treatment of obesity:

*A. Amphetamines
B. Barbituates
C. Opiates
D. None of the above

16. The most important medical use of opiates is:

A. To relieve drowsiness and depression
*B. To relieve pain
C. To relieve restlessness or excitability
D. To relieve tension, fear, or anxiety

17. LSD has been used for therapy in which of the following ways:

A. For treating alcoholism
B. For treating amnesia
C. For treating terminal cancer patients
*D. All of the above

continued

18. The most important medical use of amphetamines is:

*A. Relief of drowsiness or depression
B. Relief of tension, fear, or anxiety
C. Relief of restlessness or excitability
D. Relief of pain

19. Which of the following might be prescribed by a doctor for treatment of alcoholism:

A. Amphetamines
*B. Barbituates
C. Opiates
D. None of the above

20. Which of the following might be prescribed by a doctor for treatment of diarrhea or coughing:

A. Amphetamines
B. Barbituates
*C. Opiates
D. None of the above

21. You find yourself with someone who is suffering from the side effects of a drug. His symptoms include trembling and he is excited and talking continuously. Which of the following drugs is he most likely to have taken:

*A. Cocaine
B. LSD
C. Marijuana
D. Opium

22. You find yourself with an individual who has overdosed on an unknown drug. He is drowsy but conscious, his speech is slurred, his balance unsure, he is short-tempered, and his pulse is slow and irregular. You should:

A. Prevent him from sleeping by getting a lot of coffee into him
*B. Get him to a hospital immediately to prevent death
C. Give him amphetamines to counteract the effects
D. Give him either thorazine or librium to counteract the effects

continued

23. When cocaine use is stopped, the codaine abuser will probably feel:

*A. Depressed
B. Excited
C. Hungry
D. Stimulated

24. Which of the following drugs can cause side effects such as nausea, vomiting, constipation, itching, flushing, constriction of pupils, and respiratory depression:

A. Alcohol
B. Amphetamines
C. Barbituates
*D. Opiates

25. Which of the following does <u>not</u> apply to a baby whose mother is an opiate addict:

A. The baby is likely to be an opiate addict at birth
B. The baby is likely to have withdrawal symptoms
C. The baby is likely to be born prematurely
*D. The baby is likely to be physically deformed

26. Which one of the following does <u>not</u> take place during the opiate type of withdrawal sickness:

*A. Distorted vision and a ringing in the ears
B. Muscular pain in the back of the legs
C. Rhinorrhea (nasal discharge)
D. Severe stomach cramps

27. Which is the most dangerous combination:

*A. Alcohol and barbituates
B. Alcohol and LSD
C. Alcohol and marijuana
D. Alcohol and opiates

28. The greatest danger from overuse of an amphetamine is in its effects on:

*A. Heartbeat
B. Respiration
C. Temperature
D. Vision

continued

29. Malnutrition, scurvy, exhaustion, and high blood pressure are sometimes attributable to:

*A. Amphetamines
B. Barbituates
C. Opiates
D. None of the above

30. Death from the use of LSD is most often the result of:

A. Accidental overdose
B. Impurities remaining after faulty manufacture
*C. Suicide or accident based on perceptual changes
D. Withdrawal

31. Abuse of which of the following drugs most often causes death:

A. Dexedrine
B. Heroin
C. LSD
*D. Secobarbital

32. Methadone can produce a euphoric high in a methadone-maintained opiate addict under which of the following conditions:

A. When it is administered orally
B. When it is inhaled in powdered form
*C. When it is injected
D. All of the above

33. The time required for physical detoxification of a long-term opiate addict is:

*A. One month or less
B. One to three months
C. Three to six months
D. None of the above. Long term addicts can never be detoxified

34. Which of the following is <u>never</u> a cause of a false negative in urine testing:

A. The heroin was too weak to appear in the urine
*B. The heroin was shadowed by an antihistamine
C. The last heroin dose was taken too long before the urine test
D. The urine was diluted with an excessive amount of beer or water

continued

35. Encounter groups are used in treating drug addicts:

A. To force the addict to confront his personal problems directly
B. To help the addict learn how others perceive him
C. To provide each addict with a cohesive social unit
*D. All of the above

36. Methadone maintenance programs do <u>not</u>:

A. Allow the client to work
B. Allow resoration of weight, sexual function, and nutrition
C. Block needle hunger and euphoria
*D. Cure addiction

37. Arguments against methadone maintenance programs include all <u>except</u> which one of the following:

A. Methadone can cause death when taken in large overdoses
B. Methadone does not eliminate the personality disorder which led to drug addiction
*C. Methadone produces physically debilitating effects over the long term
D. Methadone requires maintaining patients for long periods on an addicting drug

38. Convulsions due to barbituates should be stopped by administration of:

*A. Barbituates
B. Dylantin
C. Valium
D. None of the above

39. Which of the following occurs when an individual ingests both barbituates and alcohol:

A. The alcohol blocks the effects of the barbituates
B. The barbituates block the effects of the alcohol
*C. There is an increase in the chance of overdosing
D. There is no effect

B. Likert-scale Items

Indicate the extent to which you agree or disagree with each of the following statements by circling the appropriate number.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. Drug-free residential drug treatment centers are the best treatment modality for the drug addict or drug abuser.	5	4	3	2	1
2. Treatment programs dealing with abusers of all kinds of drugs are more effective than programs treating only heroin addicts.	5	4	3	2	1
3. To stay clean after treatment, addicts must give up all drugs including marijuana and alcohol.	5	4	3	2	1
4. Addicts who never receive treatment have as much chance to become drug-free as those in treatment.	5	4	3	2	1
5. Group therapy is essential for the rehabilitation of drug addicts.	5	4	3	2	1
6. An addict's chance for success is greater in a treatment program in his own neghborhood.	5	4	3	2	1
7. An addict is more successful in a program where the staff and other addicts are members of his own racial group.	5	4	3	2	1
8. Methadone is the best way to treat heroin addicts.	5	4	3	2	1
9. The best treatment programs offer a variety of services and work with people who have all kinds of problems.	5	4	3	2	1
10. Drug-treatment programs are more effective with older addicts than with younger addicts.	5	4	3	2	1
11. All drug counselors should be ex-addicts.	5	4	3	2	1
12. In order to stay clean after treatment, an addict must give up his friends who use drugs.	5	4	3	2	1
13. It is unnecessary to have a counselor from the same ethnic group as the client.	5	4	3	2	1

continued

Indicate the extent to which you agree or disagree with each of the following statements by circling the appropriate number.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
14. Addicts should help plan their own treatment program.	5	4	3	2	1
15. Addicts who volunteer for treatment are more likely to stay clean than those forced into treatment.	5	4	3	2	1
16. Addicts need support from family and friends to stay clean.	5	4	3	2	1
17. Addicts should be made to accept treatment.	5	4	3	2	1
18. An addict should be able to choose the form of treatment he thinks is best for him.	5	4	3	2	1
19. Addicts have to want to stop using drugs to stay clean.	5	4	3	2	1
20. In order to rehabilitate himself, an addict must substitute a new dependency for his drug addiction.	5	4	3	2	1
21. Religious beliefs can help an addict to stay clean.	5	4	3	2	1
22. Most addicts are better off in jail than in treatment programs.	5	4	3	2	1
23. People use drugs because they make them feel good.	5	4	3	2	1
24. Drug use begins as part of the desire to be a member of a clique that happens to use drugs.	5	4	3	2	1
25. People use drugs to get back at their families.	5	4	3	2	1
26. Addicts are irresponsible people.	5	4	3	2	1
27. Drug abuse is a direct product of one's environment.	5	4	3	2	1

continued

Indicate the extent to which you agree or disagree with each of the following statements by circling the appropriate number.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
28. People use drugs to escape reality.	5	4	3	2	1
29. People use drugs because of peer pressure.	5	4	3	2	1
30. People use drugs to rebel against society.	5	4	3	2	1
31. Heroin users are emotionally sick people.	5	4	3	2	1
32. Heroin users have weak characters.	5	4	3	2	1
33. Heroin should be legalized in the U.S.	5	4	3	2	1
34. Drug laws are fair.	5	4	3	2	1
35. It is necessary to use drugs in order really to know their effects.	5	4	3	2	1
36. Marijuana should be legalized in the U.S.	5	4	3	2	1
37. Drug programs respond more to what the straight world wants than to what addicts need.	5	4	3	2	1
38. You have to try heroin to understand what it does.	5	4	3	2	1
39. Heroin users have a low opinion of themselves.	5	4	3	2	1
40. You must use drugs really to know their effects.	5	4	3	2	1